

# Surgery for Anterior Cruciate Ligament (ACL) injury in your knee

## Elective Orthopaedics

Information for Patients

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### What is an Anterior Cruciate Ligament (ACL)?

A ligament is a strip of strong tissue that holds bones together. The ACL holds the bottom end of the thigh bone (femur) to the top end of the shin bone (tibia). This stabilises the knee joint. It controls movement of the knee in many directions to stop the knee from collapsing and giving way when you twist or 'pivot'.

### How does it tear?

An ACL tear (rupture) is a common injury. The ACL can have a lot of force on it when you do certain movements. This can be when you change direction while running at speed. This is called a non-contact injury. In a contact injury the knee can be forcibly twisted by an opponent, in a tackle or collision.

People report feeling a pop when it ruptures. Sometimes you can hear this pop. When the tissue tears it can cause swelling and bleeding into the knee. Most people cannot go on performing their activity. You can sometimes injure just the ACL or other structures like the menisci, joint surface cartilage or other ligaments. These injuries may need surgery also.

### Why am I being offered this surgery?

If the ligament is not fixed then the knee can give way and cause more damage. This is the case for young active patients. The injury to the ligament with other related damage can raise the risk of arthritis developing in later life. This does not always happen and the natural history of this is still not clear. Surgery will not stop joint arthritis happening. But it is reasonable to believe that more damage to the joint will be reduced if the surgery is successful.

**Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice**

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## What are the benefits of surgery?

Some people can manage quite well with a non-functioning ACL. In others the knee may 'give way' or 'pivot'. This movement can happen in simple daily activities or when trying to do sports.

The goal of the surgery is to 'stabilise' the knee again to stop the abnormal movements. Your original ACL is a very complex structure and can never be replaced 'as good as new'. But a successful reconstruction can return patients to sporting activities.

## What are the risks of surgery?

Sometimes you can get complications. The team taking care of you is trained to deal with them. Here are the main risks of the surgery:

- **Infection:** An infection can happen in your wound . We give antibiotics during the surgery to reduce this risk.
- **Nerve or vessel damage:** We will look for any damage to nerves or blood vessels and repair them where needed. Nerve damage can often take longer to recover and may need more surgery. The area around the wound may feel numb for sometime. This may improve over time. In some cases it may be permanent.
- **Thrombosis:** A clot of blood (thrombosis) can happen in the deep veins of your leg. This is called deep vein thrombosis (DVT). In some cases, DVT can be serious because blood clots in your veins can break loose, travel through your bloodstream and cause a blockage in your lungs (pulmonary embolism). This can happen after surgery. It happens because of lying in one position for a long time or not being as active as you normally are. It is important to get out of bed and move around as soon as you can after your surgery. We may prescribe you medication to reduce the risk of a blood clot.
- **Stiffness:** You must do exercises to reduce this risk. The joint can sometimes still feel stiff.
- **Swelling:** Post-operative swelling can last for several months after the surgery. You must rest, exercise and walk to help improve this symptom.
- **Re-operation:** In 1 in 10 cases more surgery may be needed. This might be to remove scar tissue or improve range of movement. Sometimes it might be to assess the ligament or meniscal repair.
- **Graft Failure:** In 1 to 2 of 10 cases the new graft may re-injure or fail to heal properly. Your surgeon will talk to you if you need any more surgery.

## Exercises before surgery

You must exercise before your surgery. This will help to strengthen your muscles and give the best possible result. You should try and do some of the exercises shown in this booklet at home or in the gym. You could also swim or cycle. The most important goals you should aim for before your surgery are:

- Try to get your knee fully straight.
- Reduce the swelling to a minimum.
- Improve your leg muscle strength.
- Understand the surgery and how long rehabilitation will take.

## What happens during the surgery?

This is a day case procedure. This means you should not need to stay in hospital overnight. The body's own tissues can be used to replace the ACL. This is called a graft. The three most used areas for a graft are:

- Hamstring tendons from the inside of the same leg (or opposite leg if needed)
- Part of the patella tendon from the front of the knee
- Part of the quadriceps tendon from the front of the thigh

We will talk to you about the type of graft we will use before your surgery.

We take the graft by making a small cut (incision) that is 4 to 6cm long. This depends on which type of graft is used. The new 'ligament' is put into tunnels drilled into the femur and tibia using a 'key-hole' (arthroscopic) technique. Once in place, it is secured with tiny, titanium buttons or screws both of which remain inside the bone. The graft ends will heal and attach to the bone over the next 12 weeks.

You must arrange to have someone to stay with you for 24 hours after your surgery. If this has not been arranged when you come into hospital, we may have to cancel your operation.

## Things to do to help my recovery:

- We will discharge you home with crutches (and a brace if your surgeon requests one). Depending on how the surgery is performed, You may or may not be allowed to bear weight through the leg. Your surgeon will advise you about this. You will need the crutches to help you walk around at the start.
- It is normal for your leg to be swollen after the surgery and for you to have some discomfort or pain around the surgery site and scar. We will give you some painkillers to take home.
- Your GP will remove any stitches or staples that you have at 2 weeks.

- We will see you at the outpatient clinic around 6 to 8 weeks after the surgery.
- Your mobility will slowly improve over the first 4 to 6 weeks.
- We will refer you to a physiotherapy during the recovery stage to help you with your rehabilitation. It may take you up to 9 to 12 months to fully recover from the surgery. The specific rehabilitation program will be shown to you by the physiotherapy team and you will be guided through this.

## PRICE guidelines:

- **Protect:** Use of elbow crutches as pain allows.
- **Rest:** When resting your leg, make sure your knee is straight. Do not rest the back of your knee over a pillow.
- **Ice:** Apply ice for 20 minutes to reduce swelling. Always place ice pack over a damp cloth to protect your skin from an ice burn.
- **Compression:** You will have a compression bandage. This is removed after 24 hours. Follow advice from your nursing staff.
- **Elevation:** To control your swelling, elevate your leg (toes above your nose) for 30 minutes. Make sure your whole leg is supported with 3 or 4 pillows from your heel downwards. Lie back on your bed. Repeat this 3 times a day.

## Exercises

You can search for leaflet: 'Advice and exercises after anterior cruciate ligament surgery to your knee' (or leaflet number 939) for exercises or follow your physiotherapists program.

## When can I drive again?

Going back to driving is different for each person. Most people can return to driving between 4 to 6 weeks after this surgery. It is up to you to decide when to drive. But you must make sure that you can do an emergency stop and are completely in control of the vehicle. It is also best to start with short journeys, to make sure you are fully capable of driving safely. Do not drive if you are using crutches. Do not drive until you have good muscle control.

## When can I return to work?

This very much depends on how difficult it is for you to get to work and what your job is. As a rough guide, you can expect to return to an office job about 2 weeks after surgery. If you have a physical job, but can return on lighter duties that involve minimal walking, you may be able to return at about 4 to 6 weeks. It may take up to 3 months to return fully to more physically active jobs, specially if they involve squatting or lifting.

If you need a fitness for work certificate, please ask one of your medical care team before you are discharged.

## When can I return to sport?

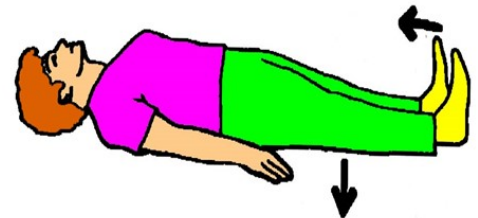
The time it takes to return to sport will depend upon how your rehabilitation is progressing. Most patients will return to running at the 4 month stage. We advise you to avoid contact sports for about 12 months. You should talk to your surgeon or physiotherapist about this.

## Exercises:

Exercises play a key part in your rehabilitation. You should try to do the following exercises 2 to 3 times a day, repeating each one 10 times. We will show you them in hospital and help you to practice them. You should do them at home. You may want to start practicing these before you come into hospital.

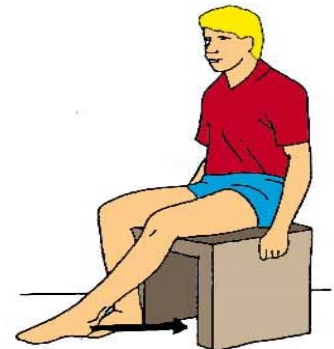
### Exercise 1:

1. Lay with your legs straight.
2. Bend your ankles and push your knees down firmly against the bed.
3. Hold for 5 seconds then relax.
4. Repeat 10 times.



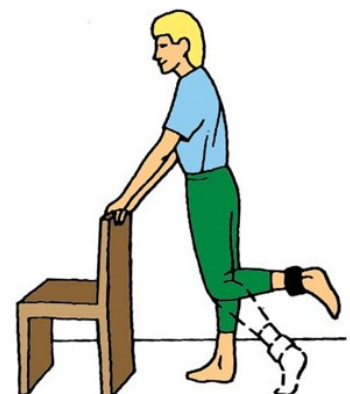
### Exercise 2:

1. Sit on a chair with your feet on the floor.
2. Bend your knee as much as possible.
3. Repeat 10 times.



### Exercise 3:

1. Sit on a bed or sofa with your operated leg straight in front of you, with your other leg on the floor (as shown).
2. Bend your upper body forwards slightly keeping your back straight.
3. Hold for 15 seconds.
4. Repeat 5 times



## Where can I find more information?

### National Ligament Registry:

[www.uknlr.co.uk/](http://www.uknlr.co.uk/)

With your consent, your name and email may be added to this national register for long term follow up if you do have the surgery. You will get questionnaires (around 1 a year) through email that help us gather long term data about the surgery. The register is designed to monitor how long the surgery has lasted and collect patient reported outcome scores (PROMS). The knowledge gained from such data will help us see any potential problems with the operation, and how to help others having this surgery.

### Contact details:

Please contact the ward you were discharged from if you have any questions:

**Ward 14:** 0116 258 4112 or 0116 258 4413

**Ward 16:** 0116 258 8335 or 0116 258 8336

**Ward 18:** 0116 258 4147 or 0116 258 4148

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